



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/696,720 | 10/28/2003 | Thomas Hathaway | 3562-000033 | 6323 |
| 27572 | 7590 | 06/29/2005 | EXAMINER | |
| HARNESSE, DICKEY & PIERCE, P.L.C. | | | LIN, ING HOUR | |
| P.O. BOX 828 | | | ART UNIT | |
| BLOOMFIELD HILLS, MI 48303 | | | PAPER NUMBER | |

1725

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,720

Applicant(s)

HATHAWAY, THOMAS

Examiner

Ing-Hour Lin

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March and 26 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-32 and 39, 42-45 rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of Madono.

Johnson et al (col. 3, lines 60+) teach the claimed foundry casting material for use in making a mold for a cast part and a foundry mold or core formed for the casting of a part such as engine block, and a method of forming a metal part using the core or mold and a method of removing residual casting material from a metal part, comprising particular foundry sand including silica sands and bank sands and synthetic sands and phenolic urethane resin and clay for the purpose of forming sand core or mold for casting metal article such as engine block. Johnson et al (col. 4, lines 57+) further teach the use of immersing the resin bonded sand core in water or a dilute alkaline solution of sodium hydroxide, potassium hydroxide or sodium carbonate for the purpose of easy removal of the sand core from castings. Johnson et al fail to teach the use of a water-soluble disintegration additive in making a mold material.

However, Madono (col. 2 lines 22+) teaches the use of water-soluble disintegration additive including alkali metal carbonates and bicarbonates for the purpose of accelerating the removing the resin bonded sand core of the residual casting material. It would have been obvious to one having ordinary skill in the art to provide Johnson et al the water-soluble

Art Unit: 1725

disintegration additive as taught by Madono in order to accelerate the removing the resin bonded sand core of the residual casting material.

3. Claims 33-38, 40-41 and 46-59 rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of Madono and further in view of Hoffman Jr. et al.

Johnson et al in view of Madono fail to teach the use of the claimed parts-washer apparatus.

However, Hoffman et al (col. 5, lines 64+) teach the claimed parts-washer apparatus for the purpose of non-caustic cleaning or removing residual casting material from the casting metal part (conductive bodies) 10, comprising a holder (grid) 19; cleaner dispersing system including at least one spray head (nozzle) 40, a fluid recirculator with a supply line 38 and drain pump 48 in line 46 for return to reservoir 34, said holder 19 comprises a first electrode of cathode 26 and the second electrode is connected to a fluid tank 14 containing electrolyte 16 for cleaning or removing the residual casting material from the casting metal part (conductive bodies) 10 held by the holder and inserted in the electrolyte. It would have been obvious to one having ordinary skill in the art to provide Johnson et al in view of Madono the use of the claimed parts-washer apparatus as taught by and further in view of Hoffman et al in order accelerate the removal of residual casting material from the cast metal part.

Response to Arguments

Applicant's arguments filed on 3/28/05 have been fully considered but they are not persuasive. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or

Art Unit: 1725

modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, applicant argued Madono's plastic capsule used for microencapsulating the disintegration additive is water resistant. However, Madono (col. 2, lines 47-51) teaches the plastic capsule is not an issue because the capsule thermally decomposes during casting process such as pouring molten metal into the mold containing the sand core; and then the additive reacts with the binder in the casting material and accelerates the breakdown of binder bonded core. Further, the additive is water soluble and can dissolve in the electrolyte. Applicant further argued that Johnson et al in view of Madono fail to teach the use of a parts washer.

However, Hoffman et al (col. 5, lines 64+) teach the claimed parts washer apparatus for the purpose of non-caustic cleaning or removing residual casting material from the casting metal part (conductive bodies) 10, comprising a holder (grid) 19; cleaner dispersing system including at least one spray head (nozzle) 40, a fluid recirculator with a supply line 38 and drain pump 48 in line 46 for return to reservoir 34, said holder 19 comprises a first electrode of cathode 26 and the second electrode is connected to a fluid tank 14 containing electrolyte 16 for cleaning or removing the residual casting material from the casting metal part (conductive bodies) 10 held by the holder and inserted in the electrolyte. It would have been obvious to one having ordinary skill in the art to provide Johnson et al in view of Madono the use of a parts washer as taught by and further in view of Hoffman et al in order accelerate the removal of residual casting material from the cast metal part.

Art Unit: 1725

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ing-Hour Lin whose telephone number is (571) 272-1180. The examiner can normally be reached on M-F (8:00-5:30) Second Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I-H Lin

I.-H. Lin

6-23-05

**KEVIN KERNS
PRIMARY EXAMINER**

Kevin/Kerns 6/26/05